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BKS027 SOLENOID INSTALLATION INSTRUCTIONS

PRELIMINARY STEPS

1. **Disconnect the power pack from the centrifuge.** Open the cover and remove the Bulb Gasket (RPI Part #BKG025) by pulling it out of the bowl groove starting with the split at the rear.
2. Remove the bowl assembly by pulling upwards.
3. Unplug and use a permanent marker to identify the spin motor connector (J6), the lift motor connector (J7) and the sensor connector (J2) from the PC Board (**see Figure 1**). Remove the ground wire and screw from the motor mounting bracket and retain the screw for use later. Remove the bowl assembly from the centrifuge and carefully set it aside.
4. Remove the membrane panel from the front of the latch housing by peeling the panel off starting in the corner. Remove the latch housing by removing (4) mounting screws (set aside the screws for later use). Slide the latch housing off the membrane panel.

PC BOARD REMOVAL PROCEDURE

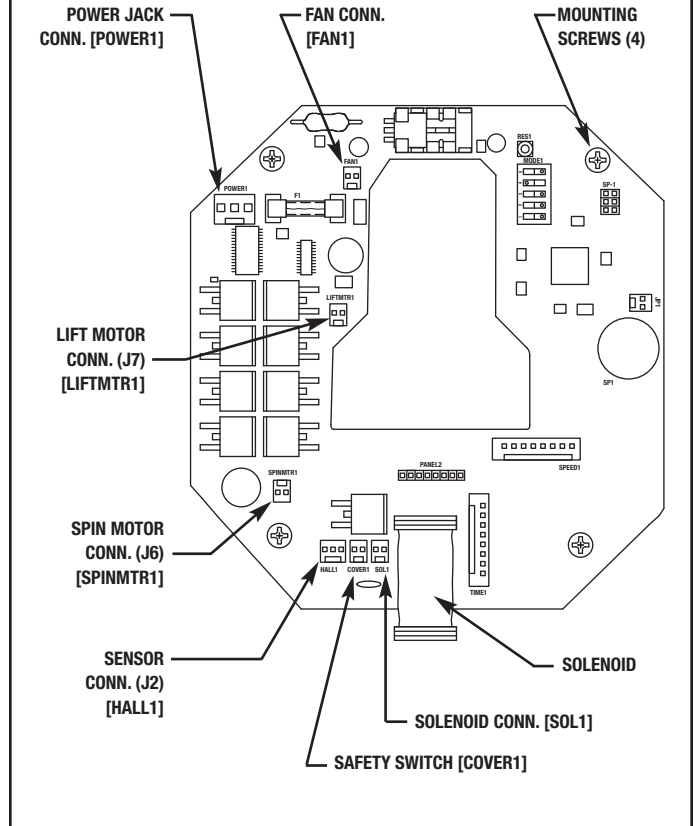
CAUTION: Ensure a static safe workplace is maintained while handling the PC Board.

1. Remove the power jack panel mounting nut and flat washer from the outside of the centrifuge body using a 3/8" hex driver or socket. Retain the mounting hardware for later use.
2. Unplug the power jack connector from the PC Board noting the routing of the existing power harness wires.
3. Remove and label with a permanent marker the safety switch connector.
4. Remove the nylon latch rod holding the latch lever in place and remove the latch lever and the solenoid arm assembly including the solenoid spring.
5. Remove (4) PC Board mounting screws and retain the screws for later use (**see Figure 1**).
6. Lift the PC Board and tilt up to access and disconnect the membrane panel flex cable from the connector on the underside of the PC Board, pay attention to how the flex circuit was folded under the PC Board.
7. Remove the fully disconnected PC Board from the centrifuge and place on a static safe work surface for use later.

SOLENOID REMOVAL AND REPLACEMENT PROCEDURE (RPI PART #BKS027)

1. Disconnect the solenoid connector from the PC Board. **NOTE:** Observe the location and coiling of the solenoid wires for replication during reinstallation of the connector and wires.
2. Remove and discard (2) screws from the bottom of the PC Board attaching the solenoid to the PC Board.

FIGURE 1



3. Attach the new solenoid to the top surface of the PC Board using the (2) new screws (inserted from the underside of the PC Board).
4. Attach the solenoid connector and wires to the PC Board. Ensure that the original coiling and folding of the solenoid wires are duplicated.

PROCEDURE FOR THE REINSTALLATION OF THE PC BOARD

1. Replace the membrane panel by attaching the flex cable connector (which passes through the wall of the centrifuge) to the underside of the PC Board.
2. Ensuring that the membrane panel flex cable is fully inserted through the centrifuge wall, make a loose "S" fold in the flex cable matching the fold noted in the original installation (**see Figure 2**). **CAUTION: Do Not Put Any Sharp Creases In The Flex Cable - Sharp Creases Could Crack The Circuitry Printed On The Cable.** Ensuring that the flex cable fold is below the PC Board, lower the PC Board into the centrifuge aligning the mounting holes in the board with the threaded standoffs in the bottom of the centrifuge. Start the (4) previously retained mounting screws through the PC Board into the standoffs but do not tighten them at this time. Check that the flex cable fold is free to move below the PC Board without being pinched.

PROCEDURE FOR THE REINSTALLATION OF THE PC BOARD *(continued)*

3. Reassemble the solenoid arm, solenoid spring and link assembly over the latch lever ensuring that the solenoid arm and link are centered over the shaft link pad mounted on the latch lever (**see Figure 2**). Insert the solenoid arm shaft and spring into the solenoid while aligning the latch lever within its mounting bosses. Fully insert the Nylon latch rod to attach the latch lever to the centrifuge.
4. Verify the free movement of the latch lever and the solenoid arm within the solenoid, adjusting the position of the PC Board if necessary. Tighten the (4) PC Board mounting screws and check for free movement of the solenoid shaft and the membrane panel flex cable underneath the PC Board.
5. Replace the power harness jack through the wall of the centrifuge and mount using the retained hardware. Plug in the power harness cable connector routing the wires to match the original position.
6. Slide the membrane panel through the slot in the latch housing without pulling any of the flex cable out from under the PC Board.
7. Verify proper engagement and operation of both the latch and the safety switch by closing and opening the lid assembly.
8. Reattach the latch housing to the centrifuge body using the (4) mounting screws.
9. Install the membrane panel ensuring it is centered within the depression in the latch housing. Using a small pin or straightened paper clip ensure that the latch access hole through the membrane panel is clear and the latch can be actuated.
10. Reattach the ground wire to the bowl assembly bracket using the retained screw.
11. Reconnect the marked bowl assembly connectors and place the bowl assembly into position verifying that the lower bracket slot is centered over the solenoid and the tall motor is located in the rear of the centrifuge.
12. Install the bulb gasket starting in the center of the lid hinge at the back of the centrifuge. Ensure that the bulb gasket is fully inserted along its length and that the lid closes completely and latches correctly.
13. Verify operation and return to service.

FIGURE 2

